

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested. The following remarks are responsive to the Advisory Action mailed January 16, 2007. As stated in the Advisory Action, the Amendment/Request for Reconsideration filed December 18, 2006 has been entered. The amendments contained herein are made based on entry of the December 18th amendment.

Claims 9, 12-15, 31-32 and 38 are presently active in this case, Claims 9, 31 and 32 amended by way of the present Amendment.

Applicants first note that two IDSs have been filed since issuance of the Office Action on August 17, 2006. Specifically, Applicants filed an IDS on October 11, 2006 and November 17, 2006. Applicants respectfully request that the Examiner consider these IDSs in conjunction with any future Official Action in this case.

Turning now to the merits, the Advisory Action mailed January 16, 2007 responded to Applicants December 18th amendments and remarks by stating,

Response to Applicant's remarks:

1) Claims 9, 10, 15: Applicant's arguments about barrier coat layer being an intermediate layer are not commensurate with the claim limitations, which does not recite any such limitation. Further, the sealing treatment could be applicable to main layer also, since as per claim limitations, both main layer and barrier coat layers are thermally sprayed films.

2) Claims 31, 32: To applicant's argument about Tokutake not teaching that anodized layer sealed by a resin, examiner responds that Bradley teaches sealing of anodized layer using organic polymers. Further, Tokutake teaches an intermediate layer comprising of polyimide resin, formed on the anodized layer (not between base material and anodized layer as stated by applicant).

3) Applicant has not traversed the ODP rejection of claims 9-14 and the ODP rejection still stands.

In order to expedite issuance of a patent in this case, Claim 9 has been amended to further clearly define the subject matter of the present invention. Specifically, Claim 9, as amended, clarifies that the barrier coat layer is an intermediate layer formed between the main layer and the base material, and that the intermediate layer, not a top coat layer, is sealed by a resin. This amendment is fully supported by the original disclosure of the specification at least at page 24, line 12 to page 26, line 23 and Fig. 2, and therefore does not raise an issue of new matter. Further, as Claim 9 has been amended according to the suggestion in the Advisory action, Applicants submit that amended Claim 9, and claims depending there from, patentably define over the cited references for the reasons stated in the December 18th response and below. In this regard, claim 31 has been amended to be dependent upon claim 9. This amendment is fully supported by the original disclosure of the specification on page 28, line 3 to page 29, line 14 and Fig. 3. Further, claim 32 has been amended to further clearly define the subject matter of the present invention. Therefore, Claims 31 and 32, as amended herein, also patentably define over the cited references and the rejection of these claims as stated in the Advisory action is moot.

By way of review, the present invention, as defined in claim 9, is directed to an internal member of a plasma processing vessel including a film layer on a base material. The film layer has a main layer and a barrier coat layer. The barrier coat layer is formed between the main layer and the base material. Therefore, the main layer serves as a top coat layer, and the barrier coat layer serves as an intermediate coat layer. At least parts of pores inside the barrier coat layer, which is not a top coat layer but an intermediate layer, are sealed by a resin to prevent a processing gas and a cleaning fluid from permeating into space between the base material and the main layer, to thereby suppress corosions generated in the space.

The Office Action mailed August 17th, 2006 rejects Claims 9, 10, 15 under 35 U.S.C. 103(a) as being unpatentable over O'Donnell et al. (US PGPUB No. 2005/015,0866) in view of

Fakuda et al. (US PGPUB No. 2003/0113479) and Diugosch et al. (US Patent No. 5,948,521).

O'Donnell et al. discloses that a multilayer coating formed on a reaction component 70 (for example, a focus ring) includes a thermally sprayed yttria-containing coating 100 (which serves as a top coat layer) and several intermediate coatings 80 and 90 (which serve as an intermediate coat layer). As the Examiner pointed out in page 3, lines 19-20 of the Office Action, O'Donnell et al. does not teach that at least parts of pores inside the intermediate coatings 80 and 90 are sealed by a resin. That is, O'Donnell is totally silent about an intermediate coat layer being sealed by resin.

Fukuda is directed to an atmospheric plasma treatment apparatus. Fukuda discloses an internal member 3a having a thermally sprayed ceramic 4a (which serves as a top coat layer) thereon. In addition, Fukuda discloses that a sealing treatment is carried out on the top coat layer (the thermally sprayed ceramic 4a), not an intermediate layer. In fact, Fukuda is totally silent about an intermediate layer, and therefore is surely silent about a sealing treatment to any intermediate layer.

Diugosch discloses a thermally conductive, electrically insulating connection including a thermally sprayed ceramic (KS layer, which corresponds to the top coat layer of the present invention) on a cooling body (KK, which corresponds to the base material of the present invention). The thermally sprayed ceramic is sealed with a thermally conductive adhesive layer (K layer) made of an epoxy resin. In other words, although Diugosch discloses that the top coat layer is sealed by a resin, this reference is also completely silent regarding the intermediate layer being sealed.

Accordingly, the cited references are totally silent with respect to at least parts of pores in the intermediate layer being sealed, as now clearly required by Applicants' amended claim 9.

As a result, the combination of O'Donnell, Fukuda and Diugosch cannot render the invention of amended claim 9 obvious.

As claims 10, 12, 14, 15, 31, 32 and 38 depend directly or indirectly from claim 9, these claims are allowable for the same reasons indicated with respect to claim 9 and further because of the additional features recited therein which, when taken alone and/or in combination with the features recited in claim 9, further remove the invention defined therein from the disclosures made in the cited references.

The Office Action mailed August 17th, 2006 provisionally rejects Claims 9-14 for obviousness-type double patenting over claims 5, 17-22 of copending Application No. 10/773,245 (Sasaki et al). Applicants traverse this rejection since the invention, as defined in claims 9-14, is totally different from Sasaki. Specifically the barrier coat layer of amended claim 9 (and claims 10-14 depending there from) is an intermediate layer formed between the base material and the main layer. Further, at least parts of pores inside the barrier coat layer, which is not a top coat layer but an intermediate layer, are sealed by a resin. In this configuration, it is possible to prevent a processing gas and a cleaning fluid from permeating into space between the base material and the main layer, to thereby suppress corosions generated in the space. In contrast, claims 5, 17-22 of Sasaki fail to recite that pores inside an intermediate layer are sealed by a resin. Therefore, the internal member according to the claims 5, 17-22 of Sasaki cannot provide the above-noted effects of the present invention. Consequently, this provisional ground of rejection is unsustainable, and should be withdrawn.

Applicants believe that this is a full and complete response to the Office Action. For the reasons discussed above, applicants now respectfully submit that all of the pending claims are in complete condition for allowance. Accordingly, it is respectfully requested that the Examiner's rejections be withdrawn; and that the pending claims be allowed in their present form. If the Examiner feels that any issues that remain require discussions, he is kindly invited to contact applicants' undersigned attorney to resolve the issues.

Should the Examiner require or consider it advisable that the specification, claims an/or drawings be further amended or corrected in formal respects, in order to place the case in condition for final allowance, then it is respectfully requested that such amendment or correction be carried out by Examiner's Amendment and the case be passed to issue.

Respectfully submitted,

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